

The lightning flash with an arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**INFORMATION** - This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the FCC Rules & CE Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

**WARNING** - Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

**CAUTION** : To prevent electric shock and risk of fire hazards:

- ◆ Do NOT use power sources other than those specified.
- ◆ Do NOT expose this appliance to rain or moisture.

This installation should be made by a qualified service person and should conform to all local codes.

## ■ Features

### Horizontal Resolution 540 TV Lines

Clear image quality has been achieved by employing a SONY CCD with 410,000 (effective) pixels, which provides a horizontal resolution of 540 TV lines.

### Filter Changeable DAY & NIGHT

This camera has a function that automatically selects the appropriate mode for either daytime or night-time conditions. COLOUR mode is used in daytime conditions to provide optimum colours, and BW mode operates in night-time conditions to enhance the definition of the image.

### Electronic IRIS

The electronic IRIS function enables continuous automatic control of the shutter between 1/50~1/120,000 seconds.

### PRIVACY Function

The PRIVACY function conceals the areas not required to appear on the image.

### VIDEO/DC Drive Lens

The video drive lens or the DC drive lens are switch selectable.

### High Sensitivity

The built-in high sensitivity SONY COLOUR CCD enables a clear image even in 0.3Lux(0.1Lux B/W) or as low as 0.002Lux with SENS-UP.

### DNR (Digital Noise Reduction)

The amount of low illuminance noise has been significantly reduced, and the signal-to-noise ratio (S/N ratio) as well as horizontal resolution have been improved, resulting in a clear and sharp image display even in the dark.

### Controlled by OSD Menu

The camera functions are controlled by selecting text displayed on the monitor screen.

### Additional Functions

SENS-UP, MOTION DETECTION, MIRROR, SHARPNESS and SYNC (INT/LL) are also available.

## Warning ■

### The camera requires periodic inspection.

Contact an authorised technician to carry out the inspection.

### Stop using your camera when you find it malfunctioning.

If the camera emits smoke or is unusually hot for a long period, a fire may be caused.

### Do not install the camera on a surface that can not support it.

If the camera is installed on an inappropriate surface, it may fall and cause injury.

### Do not hold plug with wet hands.

It could cause an electric shock.

### Do not dis-assemble the camera.

It may result in an electric shock or other hazards.

### Do not use the camera close to a gas or oil leak.

It may result in a fire or other hazards.

## ■ Contents

<b>Features</b>	2
<b>Warnings and Precautions</b>	3
<b>Components</b>	8
<b>Names and Functions of Parts</b>	9
■ Front	9
■ Top	10
■ Rear	11
<b>Installation</b>	12
■ Lens	12
· Using the auto iris	
· Using a C/CS mount lens	
■ Connecting to a monitor	15
■ Connecting to power	15

<b>Camera Operation</b>	16
■ Menu	16
■ Settings	17
• LENS (selection)	18
• SHUTTER (condition and speed control)	20
• WHITE BALANCE control	21
• BLC (Back Light Compensation)	22
• AGC (Auto Gain Control)	23
• DNR (Digital Noise Reduction)	24
• SENS-UP	24
• SPECIAL	26
• EXIT	31
<b>Troubleshooting</b>	32
<b>Specification</b>	34

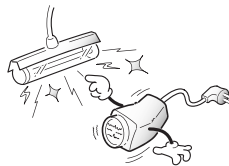
## ■ Precautions

**Do not install the camera in extreme temperature conditions.**



Only use the camera under conditions where temperatures are between -10°C and +50°C. Be especially careful to provide ventilation when operating under high temperatures.

**Do not install the camera under unstable lighting conditions.**



Severe lighting change or flicker can cause the camera to work improperly.

**Do not install or use the camera in an environment where the humidity is high.**



It can cause the image quality to be poor.

**Do not touch the front lens of the camera.**



This is one of the most important parts of the camera. Be careful not to leave fingerprints on the lens cover.

**Do not drop the camera or subject it to physical shocks.**



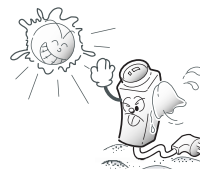
It can cause malfunctions to occur.

**Do not expose the camera to rain or spill liquids on it.**



If it gets wet, wipe dry immediately. Liquids can contain minerals that corrode the electronic components.

**Never keep the camera pointed directly at strong light.**



It can damage the CCD.

**Do not expose the camera to radioactivity.**

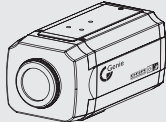
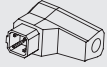
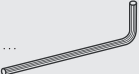




If exposed to radioactivity the CCD will fail.

### Note

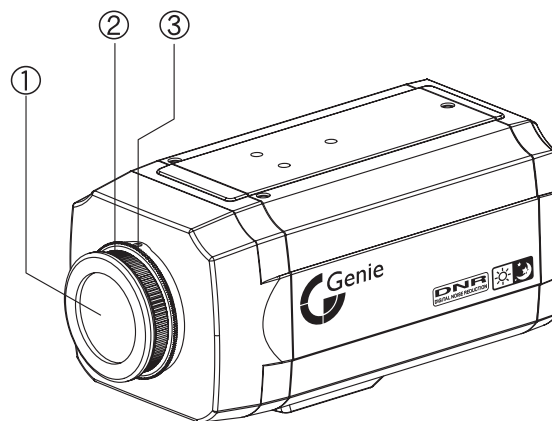
- If the camera is exposed to spotlight or an object reflecting strong light, smear or blooming may occur.
- Please check the power supply satisfies the normal specification before connecting the camera.

## ■ Components

- 1. COLOUR BODY CAMERA ..... 
- 2. AUTO IRIS LENS CONNECTION PLUG ..... 
- 3. L-WRENCH ..... 
- 4. C-MOUNT ADAPTOR ..... 
- 5. INSTRUCTION GUIDE ..... 

## Names and Functions of Parts ■

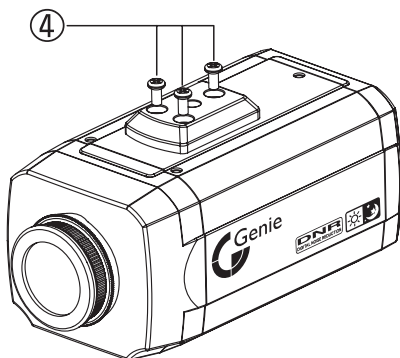
Front



- ① **Lens protection cap**  
Cover the lens when not in use.
- ② **CS-Mount lens adaptor**  
Attach the CS-Mount lens here.
- ③ **Back Focus clamp screw**  
Loosen the clamp screw with a screwdriver before adjusting the Back Focal length.

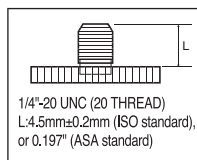
## Names and Functions of Parts

### Top

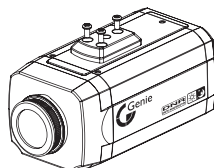


#### ④ Mounting Bracket

Use the screw holes provided when fixing the camera onto a mounting bracket. Use the clamp screw as shown in the picture.

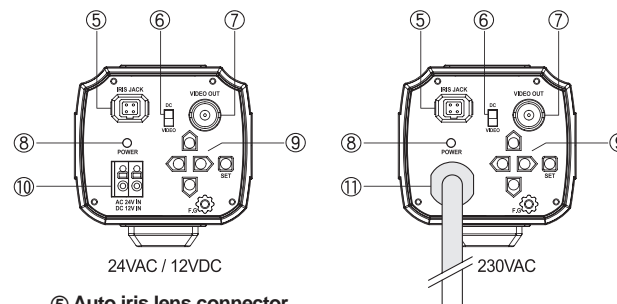


※ The mounting bracket can be attached to either the bottom or the top of the camera. Be careful not to tighten the screws more than 5mm into the body, otherwise serious damage can occur.



## Names and Functions of Parts

### Rear



#### ⑤ Auto iris lens connector

Connection terminal for an auto iris lens.

#### ⑥ Auto iris lens selection switch

Used to change between DC or Video depending upon the type of auto iris in use.

#### ⑦ Video output terminal

Sends video signals and connects to the video input terminal of the monitor.

#### ⑧ Power lamp

Lights up when the correct power is supplied to the camera.

#### ⑨ Setting button

● **SET button** : Used for the menu display. This button can be used to confirm settings after changing the value of the selected function or current conditions.

● **UP & DOWN buttons** : Used for selecting items by moving the cursor up or down on the menu screen.

● **LEFT & RIGHT buttons** : Used when changing item values, by moving the cursor to the left or right on the menu screen.

#### ⑩ Power input terminal

Low voltage power connection.

#### ⑪ AC Power Cord

Accept AC90~240V-50Hz/60Hz

## ■ Installation

### ■ Lens

The camera is supplied without a lens. Lenses, such as auto iris, CS-Mount and C-Mount, can be used.

#### Note

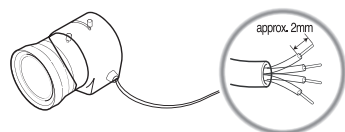
- Using a DC auto iris lens is recommended to achieve the best possible results from the camera.
- Please keep the lens clean.
- Foreign objects or fingerprints on the lens will result in inferior image quality, especially in low light level conditions.

#### When using an auto iris lens

1. Strip back about 8mm of the outer sheath of the auto iris lens cable.

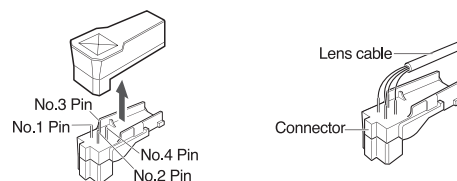


2. Strip off about 2mm of the insulation of wires inside the lens cable.

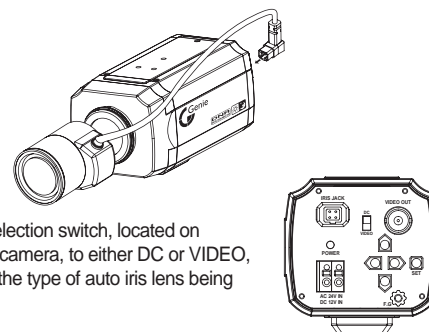


3. Remove the cover of the auto iris lens connection plug and solder the wires to the connector pins inside the plug, as shown below.

Pin No.	LENS	
	DC	VIDEO
No.1 Pin	Damping Coil-	Red (power)
No.2 Pin	Damping Coil+	NC
No.3 Pin	Drive+	White (video signal)
No.4 Pin	Dre-	Black (GND)



4. Replace the auto iris lens connection plug cover. Remove the lens protection cap and then attach the auto iris lens to the camera by screwing it in clockwise.
5. Insert the connection plug connected to the auto iris lens cable into the auto lens connector jack, which is located on the rear of the camera.

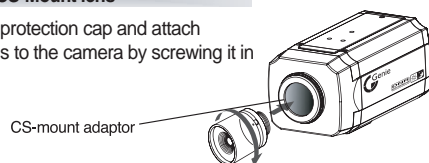


6. Set the lens selection switch, located on the rear of the camera, to either DC or VIDEO, depending on the type of auto iris lens being used.

## ■ Installation

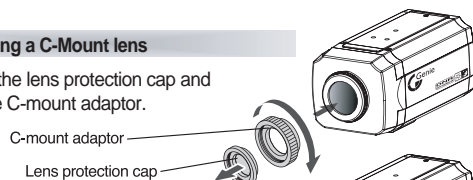
### When using a CS-Mount lens

Remove the lens protection cap and attach the CS-Mount lens to the camera by screwing it in clockwise.

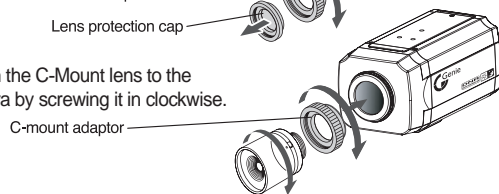


### When using a C-Mount lens

1. Remove the lens protection cap and attach the C-mount adaptor.



2. Attach the C-Mount lens to the camera by screwing it in clockwise.

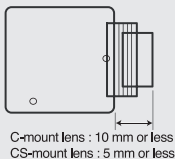


### Note

- Use the specified lens connection parts as shown in the picture below. Using of the wrong sized parts may cause damage to the inside of the camera or result in poor fitting.

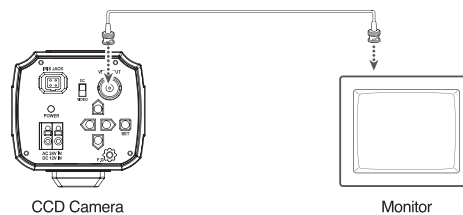
- Using of a lens which is too heavy affects the balance of the camera and may cause a malfunction. Please use a lens that weighs less than 450g.

- Select Av mode, if possible, when adjusting the automatic light control (ALC) of an auto lens. Use of PK mode may cause hunting.



## ■ Connecting to a monitor

Connect the video output terminal located on the rear of the camera to the monitor.

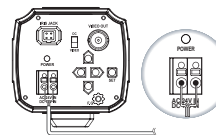


- The connection method varies depending on the type of monitor and accessories. Please refer to the monitor user manual.
- Turn off the power when connecting.

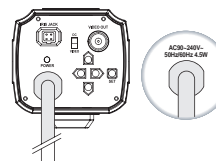
## ■ Connecting to power

Check the standard power requirement before connecting to power.

**Dual Power Type**  
(AC 24V/DC 12V, AC 24V Class2)  
**DC Power Type (DC 12V, 500mA)**



**AC90~240V-50Hz/60Hz 4.5W**





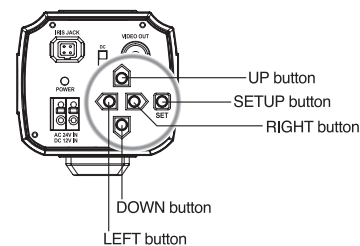
## ■ Camera Operation

### ■ Menu

SETUP menu	
LENS (selection)	• MANUAL • DC/VIDEO
SHUTTER (condition and speed control)	• ESC • MANUAL • FLK
WHITE BALANCE control	• ATW • AWC • MANUAL
BLC (Back Light Compensation)	• OFF • LOW • MIDDLE • HIGH
AGC (Auto Gain Control)	• OFF • NORMAL • HIGH
DNR (Digital Noise Reduction)	• OFF • LOW • MIDDLE • HIGH
SENS-UP (Low illuminance)	• OFF • AUTO
SPECIAL	• CAMERA ID • COLOUR • SYNC • MOTION DETECTION • PRIVACY • MIRROR • SHARPNESS • RESET • RETURN
EXIT	

### ■ Settings

Settings can be made using the 5 buttons located on the rear of the camera



1. Press the SET button

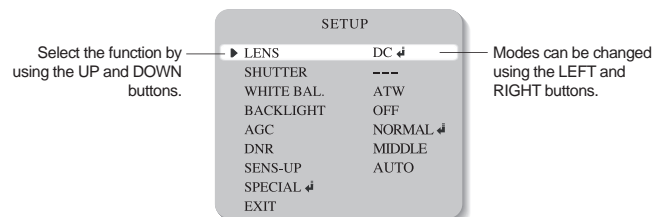
- Settings can now be made. The SETUP menu is displayed on the monitor.

SETUP	
► LENS	DC ↕
SHUTTER	---
WHITE BAL.	ATW
BACKLIGHT	OFF
AGC	NORMAL ↕
DNR	MIDDLE
SENS-UP	AUTO
SPECIAL ↕	
EXIT	

2. Select a menu item from the list available by using the UP and DOWN buttons.

- The cursor can be moved up or down by using the UP and DOWN buttons. Position the cursor to point to the function requiring adjustment.

## ■ Camera Operation



- Press the LEFT or RIGHT button to change the Menu selection.
  - When the LEFT or RIGHT button is pressed, available values and modes are displayed in order. Keep pressing the button until you get to the mode you wish to select.
- Select 'EXIT' and then press the SET button to exit the set up Menu.

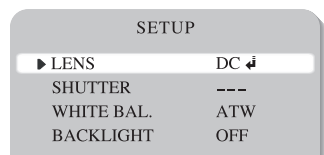
### Note

- If appears at the mode selected, it means that there is a sub-menu which can be selected by pressing the SET button.
- If --- appears at the mode item, it means that there are no modes available for selection.

### LENS (selection)

This function is used to adjust the brightness of the screen.

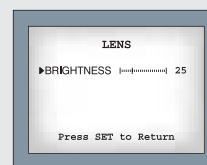
- When the SETUP menu is displayed on the screen, position the cursor to point to 'LENS' by using the UP and DOWN buttons.
- Select the type of the lens setting to use by pressing the LEFT or RIGHT button.



### ⦿ DC/VIDEO : Auto Iris Lens selection

#### Note

- When using an auto iris lens the setting of the auto iris lens selection switch, located on the back of the camera, must be on DC or VIDEO depending on the type of the lens being used. (Please refer to the picture on page 13)
- The image brightness can be adjusted in DC mode. The brightness adjustment is the range of 1 ~ 70.



### ⦿ MANUAL : Manual Lens selection

- Press the SET button to return to the previous menu

## ■ Camera Operation

### SHUTTER (condition and speed control)

Auto or manual control can be selected.

1. When the SETUP menu is on the screen, position the cursor to point to 'SHUTTER' by using the UP and DOWN buttons.
2. Select the shutter mode by pressing the LEFT or RIGHT button.

- ⦿ **FLK** : Select 'FLK' mode when flickering occurs on the screen due to an imbalance between illumination and frequency.  
NTSC Model: 1/120, PAL Model: 1/100
- ⦿ **ESC** : Auto control of the shutter speed is enabled.  
When ESC mode is on, the shutter speed is controlled automatically according to the brightness of the scene.
- ⦿ **MANUAL** : The shutter speed can be controlled manually.

SETUP	
LENS	DC
▶ SHUTTER	FLK
WHITE BAL.	ATW
BACKLIGHT	OFF

3. Select 'MANUAL' mode for manual shutter speed adjustment.
  - Selectable speeds are from '1/60' to '1/120,000'sec (NTSC) and '1/50' to '1/120,000'sec (PAL).
4. Press the SET button when the settings are completed.



#### Note

- While using the internal synchronous system, if the shutter setting is on 'ESC' and the camera is directly facing bright fluorescent lights the image on the screen can be adversely affected - therefore choose the installation location carefully.
- When 'MANUAL' mode is on, the SENS UP function cannot be used.

### WHITE BALANCE control

The screen colours can be adjusted using the WHITE BALANCE function.

1. Position the cursor to point to 'WHITE BAL' on the SETUP menu by using the UP and DOWN buttons.
2. Select the mode you wish to adjust by pressing the LEFT or RIGHT buttons.

SETUP	
LENS	DC
SHUTTER	---
▶ WHITE BAL	ATW
BACKLIGHT	OFF

※ Select one of the 3 modes below.

- ⦿ **ATW(Auto Tracking White Balance)** : This mode can be used within the colour temperature range 1,800°K ~ 10,500°K (eg, fluorescent light, outdoor, sodium vapour lamp etc.)
- ⦿ **AWC(Auto White Balance Control)** : Press the SET button while the camera is directed at a piece of white paper to obtain the optimum state under current illumination. If the environment, including the light source, changes the white balance will need to be adjusted again.
- ⦿ **MANUAL** : The manual adjustment mode enables finer adjustment.  
Select ATW or AWC first then change to manual adjustment mode and press the SET button. Set the appropriate colour temperature then increase / decrease the red and blue colour values and monitor the colour changes of the object.



#### Note

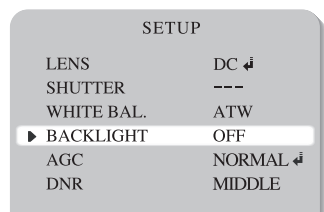
- Under the following conditions the WHITE BALANCE function may not operate properly. In such cases, please select the AWC mode.
  - ① When the object's surroundings have a very high colour temperature (eg, a clear sky and sunset)
  - ② When the object's surroundings are dark
  - ③ If the camera directly faces a fluorescent light or is installed in a place where there are considerable changes in illumination, the WHITE BALANCE function may become unstable.

## ■ Camera Operation

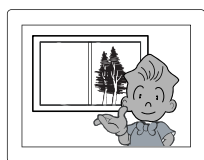
### BLC (Back Light Compensation)

When there is a strong backlight behind the object, clear images of the background as well as the object can still be obtained by using the BACKLIGHT function.

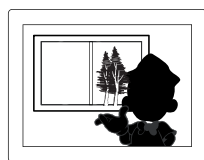
1. Position the cursor to point to 'BACKLIGHT' on the SETUP menu by using the UP and DOWN buttons.
2. Select the value required by pressing the LEFT or RIGHT button.



- **HIGH** : The gain increases from 0dB up to 42dB.
- **MIDDLE** : The gain increases from 0dB up to 30dB.
- **LOW** : The gain increases from 0dB up to 18dB.
- **OFF** : BACKLIGHT function does not operate.



BACKLIGHT ON

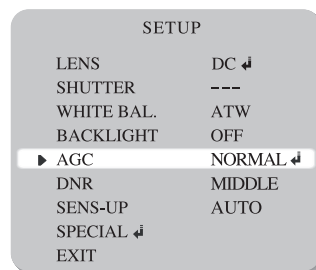


BACKLIGHT OFF

### AGC (Auto Gain Control)

1. Position the cursor to point to 'AGC' on the SETUP menu by using the UP and DOWN buttons.
2. Select the value required by pressing the LEFT or RIGHT button. As the level of gain increases the screen gets brighter but the level of noise will also increase.

- **HIGH** : The gain varies between the range of 6dB ~ 42dB.
- **NORMAL** : The gain varies between the range of 6dB ~ 30dB.
- **OFF** : The gain is fixed at 6dB.



## ■ Camera Operation

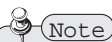
### DNR (Digital Noise Reduction)

The level of background noise in low light decreases automatically as the level of gain changes.

1. Position the cursor to point to 'DNR' on the SETUP menu by using the UP and DOWN buttons.
2. Select the value required by pressing the LEFT or RIGHT button.

SETUP	
LENS	DC ↕
SHUTTER	---
WHITE BAL.	ATW
BACKLIGHT	OFF
AGC	NORMAL ↕
▶ DNR	MIDDLE
SENS-UP	AUTO

- ⦿ **OFF** : There is no reduction in noise level.
- ⦿ **LOW** : There is a small reduction in noise level with almost no ghost image.
- ⦿ **MIDDLE** : The most effective mode. There is a sufficient reduction in noise levels without causing significant ghosting.
- ⦿ **HIGH** : The level of noise is reduced greatly, however there is an increase in ghosting.



#### Note

- When AGC is turned off, DNR does not operate.

### SENS UP (Low Illuminance)

SENS UP helps maintain a bright, clear screen image by automatically detecting changes in the level of light in low light level conditions.

1. Position the arrow to point to 'SENS UP' on the SETUP menu by using the UP and DOWN buttons.
2. Select the value required by pressing the LEFT or RIGHT button.

- ⦿ **AUTO** : Low light level automatic mode.
- ⦿ **OFF** : The function does not operate.



#### Note

- When SHUTTER is in the manual or flk mode, SENS UP does not operate.
- When AGC is turned off, SENS UP does not operate.

SETUP	
LENS	DC ↕
SHUTTER	---
WHITE BAL.	ATW
BACKLIGHT	OFF
AGC	NORMAL ↕
DNR	MIDDLE
▶ SENS-UP	AUTO
SPECIAL ↕	
EXIT	

3. Press the SET button when all the settings are complete.



#### Note

- The maximum storage magnification in low light level movement situations can be adjusted by pressing the SET button in 'AUTO' mode. (X2~X128)
- As the magnification increases the screen gets brighter; however the after image also increases.
- If storage magnification is increased while SENS UP is operational, it may cause noise and spots may appear; this is normal.

## ■ Camera Operation

### SPECIAL

1. Position the cursor to point to 'SPECIAL' on the SETUP menu by using the UP and DOWN buttons.
2. Select the mode required by pressing the UP or DOWN button.

SPECIAL	
▶ CAMERA ID	OFF
COLOR	AUTO
SYNC	INT
MOTION DET	OFF
PRIVACY	OFF
MIRROR	OFF
SHARPNESS	ON ↕
RESET	
RETURN	

🔍 **CAMERA ID** : If an ID is input, this camera ID appears on the monitor and recorded footage.

- 1) Position the cursor to point to 'CAMERA ID' by using the UP or DOWN button.
- 2) Select 'ON' by pressing the LEFT or RIGHT button.

#### Note

- If 'OFF' is selected, the ID does not appear on the monitor even if it has been input.

SPECIAL	
▶ CAMERA ID	OFF
COLOR	AUTO
SYNC	INT
MOTION DET	OFF
PRIVACY	OFF
MIRROR	OFF
SHARPNESS	ON ↕
RESET	
RETURN	

- 3) Press the SET button.

Camera ID	
A B C D E F G H I J K L M	
N O P Q R S T U V W X Y Z	
a b c d e f g h i j k l m	
n o p q r s t u v w x y z	
- . 0 1 2 3 4 5 6 7 8 9	
← → CLR POS END	
-----	

- 4) Up to 15 characters can be used for the camera ID.

① Move the cursor to the letter required by using the UP and DOWN button.

Camera ID	
A B C D E F G H I J K L M	
N O P Q R S T U V W X Y Z	
a b c d e f g h i j k l m	
n o p q r s t u v w x y z	
- . 0 1 2 3 4 5 6 7 8 9	
← → CLR POS END	
-----	

- ② Select an ID from A,B~Y,Z, a,b~y,z, 0,1~8,9 by using the UP, DOWN, LEFT and RIGHT buttons.
- ③ Lock in the characters by using the SET button.
  - Once locked in the cursor moves to the next space in the ID.
- ④ Repeat the above steps until the ID is complete.

#### Note

##### • If the wrong name has been input....

Press the SET button after moving the cursor to CLR and all the letters will be erased. If you want to correct a letter move the cursor to the arrow at the bottom left of the screen and press 'SET'.

Position the cursor above the letter you wish to correct and then move the cursor onto the letter you wish to choose and press the SET button.

## ■ Camera Operation

5) When the camera ID is complete, select a position for the name to be displayed.

① Move the cursor onto 'POS' and then press the SET button.



② The ID will appear in the top left corner.



③ Select the position where the ID is to be displayed by using the 4 directional buttons, and then press the SET button.



6) Select 'END' and press the SET button to complete ID input.

### ● COLOUR

- AUTO : This camera has an IR Cut Filter and automatically changes to the appropriate mode dependant on lighting levels. COLOUR mode is selected during daylight and B/W mode at night time.

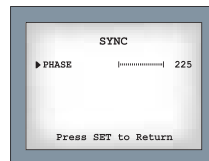


### Note

- When the AGC is turned off, COLOUR does not operate.
- When an infrared light is used, there may be a problem with focusing.

● **SYNC** : Two synchronisation modes are available, INTERNAL and EXTERNAL LINE-LOCK. In LINE-LOCK mode, it synchronises the video signal between cameras without a synchronous generator. The line-lock synchronisation is only used in areas of 60Hz (NTSC Models) / 50Hz (PAL Models).

- INT : Internal synchronisation
- LL : External line-lock synchronisation
- If 'LL' is selected, it can be adjusted to the desired phase. Press the SET button.
- Adjust to the desired phase from 0 to 359.



### Note

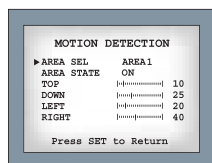
- When the mains frequency is 50Hz, the line-lock mode (NTSC Models) cannot be used.
- When the mains frequency is 60Hz, the line-lock mode (PAL Models) cannot be used.
- 'Sync' mode is fixed to 'INT' in DC12V input power
- 'Sync' mode is fixed to 'INT' in AC230V input power

## ■ Camera Operation

### ● MOTION DETECTION:

This product has a feature that allows you to observe movements of objects in 4 different areas on the screen, and the words 'MOTION DETECTED' appear on the screen when movement is detected; hence a single individual can conduct supervision efficiently. The camera detects an object's movement by sensing disparity of outline, and level of brightness and colour.

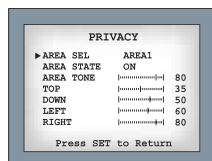
- Press the SET button.
  - OFF : MOTION DETECTION mode is cancelled.
  - ON : Any motion in the selected areas is observed.
- Select the observation area from the 4 areas in AREA SEL mode.
- Select ON mode for the chosen area.
- Adjust the size of the area to be observed by using the UP, DOWN, LEFT or RIGHT button.



- Press the SET button to save the changes and complete the setting.

### ● PRIVACY : This mode conceals the areas you do not wish to appear on the screen.

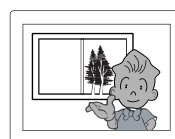
- OFF : Cancels the PRIVACY mode. - ON : Operates the PRIVACY mode.
- Press the SET button.



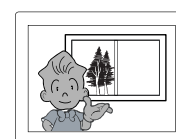
- Select the area you do not wish to appear from the 4 areas in the AREA SEL mode.
- Select ON mode for the chosen area.
- Adjust the size of the area to be concealed by using the UP, DOWN, LEFT or RIGHT button.

### ● MIRROR

- ON : Sets a horizontal image inversion.
- OFF : Cancels the inversion.



MIRROR ON



MIRROR OFF

- SHARPNESS : The outline of the video image becomes cleaner and more distinctive as the level of SHARPNESS increases. If the level goes up excessively, however, it may affect the video image and generate noise.

- Press the SET button.



- The available range of level is 0 ~ 31.

### ● RESET : Returns to factory settings.

### ● RETURN : Saves the SPECIAL menu and returns to the SETUP menu.

### EXIT

Saves all the setting menus and then exits.



## ■ Troubleshooting

If there are problems with the camera operation, check the tables below. If the problem persists, please contact the agent who supplied the product.

Problems	Troubleshooting
Nothing appears on the screen.	<ul style="list-style-type: none"> <li>• Check the power connection.</li> <li>• Check the video signal line connection.</li> </ul>
The video image is not clear.	<ul style="list-style-type: none"> <li>• Make sure that the lens is clean. Clean the lens with a clean lint free cloth or brush.</li> <li>• Adjust the contrast control on the monitor.</li> <li>• Make sure that the screen is not exposed directly to a bright light. Re-position the camera if necessary.</li> </ul>
The screen is dark.	<ul style="list-style-type: none"> <li>• Adjust the contrast control of the monitor.</li> <li>• If there is an intermediate device, set the 75ohm Hi-z correctly, and also check the connections.</li> <li>• If necessary, adjust the brightness level.</li> </ul>
There is a problem with the camera operation. The camera surface is too hot and black stripes appear on the screen.	<ul style="list-style-type: none"> <li>• Check if an appropriate power source to the camera complies with the manufacturer's standard requirement, or if the voltage is fluctuating. Check for ground loops.</li> </ul>

Problems	Troubleshooting
The MOTION DETECTION function is not working.	<ul style="list-style-type: none"> <li>• Check if 'MOTION DETECTION' mode is turned on.</li> <li>• Check the setting of the MD AREA.</li> </ul>
Colours are not quite right.	<ul style="list-style-type: none"> <li>• Check the 'WHITE BAL' setting.</li> </ul>
The screen is flickering.	<ul style="list-style-type: none"> <li>• Check if the camera is facing directly into sunlight or fluorescent light.</li> </ul>
L/L mode cannot be selected.	<ul style="list-style-type: none"> <li>• Have you connected your camera to DC power source? Connect it to AC power source.</li> </ul>
L/L mode is not available.	<ul style="list-style-type: none"> <li>• Check the frequency of power supply (60Hz for NTSC, 50Hz for PAL).</li> </ul>
COLOUR mode is not working.	<ul style="list-style-type: none"> <li>• Check if the AGC menu is set to the OFF position.</li> </ul>
SENS-UP function is not working.	<ul style="list-style-type: none"> <li>• Check if the AGC menu is set to the OFF position.</li> <li>• Check if the SHUTTER menu is set to MANUAL mode.</li> </ul>

## ■ Specifications (24VAC / 12VDC)

ITEM		NTSC		PAL	
Power Source		AC24V / DC12V	DC12V	AC24V / DC12V	DC12V
		250mA(AC24V) / 400mA(DC12V)	300mA	250mA(AC24V) / 400mA(DC12V)	300mA
C C D	Total Pixels	811(H) x 508(V)		795(H) x 596(V)	
	Effective Pixels	768(H) x 494(V)		752(H) x 582(V)	
	Size	1/3 inch interline transfer CCD			
	Scanning System	2:1 Interlace			
S Y N C	Synchronisation	INT/LL Selectable 0~359°(Adjustable)	INT	INT/LL Selectable 0~359°(Adjustable)	INT
	Frequency	Horizontal:15.734 KHz Vertical :59.94 Hz		Horizontal: 15.625 KHz Vertical : 50.00 Hz	
E L E C T R I C A L	Resolution	540 TV Lines			
	Video Output	1.0Vp-p/75 (Video 0.714Vp-p Sync 0.286Vp-p)		1.0Vp-p/75 (Video 0.7 Vp-p Sync 0.3 Vp-p)	
	S/N (Y signal)	50dB (AGC Off)			
	Min. Illumination	0.3Lux / F1.2 (Color), 0.1Lux / F1.2 (B/W), 0.002Lux (Sens-up)			
	Colour	AUTO			
	Gain Control	OFF / LOW / MIDDLE / HIGH			
	White Balance	ATW / AWC / MANUAL (1,800°K~10,500°K)			
	Electronic Shutter Speed	AUTO / MANUAL (1/60~1/120,000)		AUTO / MANUAL (1/50~1/120,000)	
	Sens-Up	OFF / AUTO			
	O.S.D	Built-in			
	Motion Detection	ON / OFF (4 Programmable Zones)			
	DNR	OFF / LOW / MIDDLE / HIGH (Noise Reduction)			
Mirror	Built-in (Horizontal Image Inversion)				
Privacy Function	ON / OFF (4 Programmable Zones)				
IRIS Control	DC / VIDEO				
Lens Mount		C/CS Mount (Screw Lock)			
Operating Temperature/Humidity		-10°C ~ +50°C / 30~90% RH			

## Specifications (230VAC) ■

ITEM		NTSC		PAL	
Power Consumption		MAX. 4.5watt.			
C C D	Total Pixels	811(H) x 508(V)		795(H) x 596(V)	
	Effective Pixels	768(H) x 494(V)		752(H) x 582(V)	
	Size	1/ 3 inch interline transfer CCD			
	Scanning System	2:1 Interlace			
E L E C T R I C A L	Synchronisation	Internal			
	Frequency	Horizontal:15.734 KHz Vertical :59.94 Hz		Horizontal: 15.625 KHz Vertical : 50.00 Hz	
	Resolution	540 TV Lines			
	Video Output	1.0Vp-p/75 (Video 0.714Vp-p Sync 0.286Vp-p)		1.0Vp-p/75 (Video 0.7 Vp-p Sync 0.3 Vp-p)	
	S/N (Y signal)	50dB (AGC Off)			
	Min. Illumination	0.3Lux / F1.2 (Color), 0.1Lux / F1.2 (B/W), 0.002Lux (Sens-up)			
	Colour	AUTO			
	Gain Control	OFF / LOW / MIDDLE / HIGH			
	White Balance	ATW / AWC / MANUAL (1,800°K~10,500°K)			
	Electronic Shutter Speed	AUTO / MANUAL (1/60~1/120,000)		AUTO / MANUAL (1/50~1/120,000)	
	Sens-Up	OFF / AUTO			
	O.S.D	Built-in			
	Motion Detection	ON / OFF (4 Programmable Zones)			
	DNR	OFF / LOW / MIDDLE / HIGH (Noise Reduction)			
	Mirror	Built-in (Horizontal Image Inversion)			
	Privacy Function	ON / OFF (4 Programmable Zones)			
	IRIS Control	DC / VIDEO			
Lens Mount		C/CS Mount (Screw Lock)			
Operating Temperature/Humidity		-10°C ~ +50°C / 30~90% RH			

※ MAINS POWER OPTION - AC230V : DNR5352/240

## ■ MEMO



---

Model : DNR5352  
DNR5352/240

## True Day & Night Camera

Instruction Guide

---



**GENIE CCTV LTD.**

CCTV House, City Park, Watchmead, Welwyn Garden City, Hertfordshire, AL7 1LT

Tel : +44 (0) 1707 330541 Fax : +44 (0) 1707 330543

[www.geniecctv.com](http://www.geniecctv.com)



Edition. GN-AUGUST 2010